REMARKS

Applicant wishes to thank the Examiner for considering the present application. In the Office Action dated May 24, 2002, claims 1-21 were pending in the application. Claims 9 and 14 have herein been canceled without prejudice. Claims 22-31, fully supported by the original specification have herein been added. Applicant respectfully requests the Examiner for reconsideration.

A one- month extension of time in which to respond is herein requested.

Claim 1 stands rejected under 35 USC §103(a) as being unpatentable over *Sherman* (6,021,309) in view of *Floury* (5,963,845). Claims 2-5, 7 and 9-17 stand rejected under 35 USC §103(a) as being unpatentable over *Sherman* in view of *Floury* in further view of *Wiswell* (6,205,319). Claim 6 stands rejected under 35 USC §103(a) as being unpatentable over *Sherman* in view of *Floury* in further view of *Black* (6,377,561). Claim 8 stands rejected under 35 USC §103(a) as being unpatentable over *Sherman* in view of *Floury* in further view of *Galvin* (6,182,927). Claims 1 and 15 have been amended to include the routing table and that the controller uses the information in the routing table to reconfigure the communications control circuit through the programmable frequency synthesizer.

None of the references teach or suggest storing the tuning information in a routing table and then using that information to do the reconfiguring. Although the Floury reference mentions reconfiguring a satellite, the reconfiguration is done directly and not using a routing table as taught in the present invention. Also, neither the Wisell nor the Sherman reference teaches using a routing table for this purpose. Applicant respectfully requests the Examiner for reconsideration of these rejections. The claims dependent on claims 1 and 15 recite further limitations thereto. Therefore Applicant respectfully requests reconsideration of these claims as well.

Claims 18-21 stand rejected under 35 USC §103(a) as being unpatentable over *Sherman* in view of *Floury* in further view of *Reesor* (4,472,720). Applicant respectfully traverses.

Claims 18-21 are directed to a method for configuring a satellite system. The system uses a reconfigurable satellite that has reconfiguration instructions transmitted thereto. The payload is reconfigured in the reconfigurable satellite. A satellite from the network is repositioned and the reconfigurable satellite is moved into the network position. Applicant respectfully submits that *Sherman* in view of *Floury* does not teach or suggest the repositioning of a satellite. The Examiner agrees on page 8 which states, "In the above, it does not include the repositioning a satellite."
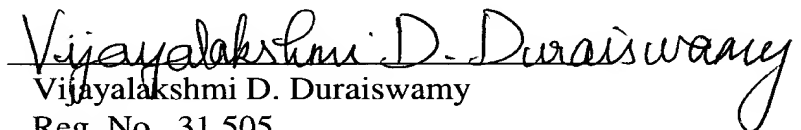
The Examiner has cited the *Reesor* reference for the teaching of repositioning a satellite. Although the *Reesor* reference teaches repositioning a satellite, the repositioning is only a slight repositioning in response to a correction signal transmitted by a ground station transmitter means. The resource system is a system of geosynchronous satellites that may be adjusted during the operation to maintain a relative position therebetween. The satellites always maintain a generally similar position.

The present invention is directed to the reconfiguration of a network. That is, one reconfigurable satellite may be positioned into the place of another satellite. This is desirable, for example, when one satellite is malfunctioning or is about to run out of fuel. This is substantially more than the slight adjustment taught by *Reesor*. Therefore, no teaching or suggestion is provided in the *Reesor* reference for replacing one satellite with another. Likewise, claims 19-21 are further limitations of claim 18 and are also believed to be allowable for the same reasons set forth above.

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In light of the above amendments and remarks, Applicant submits that all objections and rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Amended)   A   system   for   providing   high   frequency   data communications in a satellite-based communications network, the system comprising:

a plurality of communications satellites each having uplink and downlink antennas capable of receiving and transmitting a plurality of signals, each of said satellites having a communication control circuit;

at least one of said satellites being a reconfigurable satellite having, a programmable frequency synthesizer coupled to a communications control circuit;

a routing table storing tuning information therein;

a controller located on said satellite coupled to said communications control circuit, said controller controlling a frequency reconfiguration of said communications control circuit through said programmable frequency synthesizer in response to said tuning information.

Please cancel claim 9, without prejudice.

10. (Amended)   A payload circuit as recited in claim [9] 15 wherein said communications control circuit comprises an up converter and a down converter.

11. (Amended)   A payload circuit as recited in claim [9] 15 wherein said communications control circuit comprises a transponder.

13. (Amended)   A payload circuit as recited in claim [9] 15 wherein said [reconfiguration circuit comprises a] programmable frequency synthesizer is coupled to said up converter and said down converter.

Please cancel claim 14, without prejudice.

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15. (Amended), A payload circuit [as recited in claim 14 wherein said reconfiguration circuit comprises] for a satellite comprising:

a receive array;

a receive beam forming network;

a transmit array;

a transmit beam forming network;

a communications control circuit for controlling communications of satellite; and

a reconfiguration circuit coupled to the communications control circuit for reconfiguring the communications control circuit, said reconfiguration circuit comprising a programmable frequency synthesizer, an on-board computer and a routing table having tuning information stored therein, said on-board computer [updating said routing table with reconfiguration data] controlling a [frequency] reconfiguration of said communications control circuit through said programmable frequency synthesizer in response to said tuning information.

16. (Amended) A payload circuit as recited in claim [9]15 wherein said communications control circuit comprises a time division multiple access switch.

17. (Amended) A payload circuit as recited in claim [9]15 wherein said communications control circuit comprises a packet switch.

19. (Amended) A method as recited in claim 18 wherein the step of reconfiguring [a satellite] the payload comprises the step of changing [the] an up converter frequency and down converter frequency.

22. (New) A method as recited in claim 18 further comprising storing tuning information in a routing table.

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23. (New)   A method as recited in claim 18 wherein the step of reconfiguring the payload comprises changing the amplitude or phase coefficients of a beam in response to the tuning information in the routing table.

24. (New)   A method as recited in claim 18 wherein moving the reconfigurable satellite is performed using east/west station keeping.

25. (New)   A method as recited in claim 18 wherein moving the reconfigurable satellite is performed using north/south station keeping.

26. (New)   A method as recited in claim 18 further comprising updating the routing table from an order wire.

27. (New)   A method as recited in claim 18 further comprising updating the routing table from an RF control channel.

28. (New)   A method of configuring a satellite comprising:

deploying a reconfigurable satellite;

storing tuning information in a routing table;

transmitting reconfiguration instructions to said satellite;

reconfiguring the payload of the reconfigurable satellite in response to the tuning information in the routing table.

29. (New)   A method as recited in claim 28 wherein the step of reconfiguring the payload comprises changing the amplitude or phase coefficients of a beam in response to the tuning information in the routing table.

30. (New)   A method as recited in claim 28 further comprising updating the routing table from an order wire.

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31. (New)   A method as recited in claim 28 further comprising updating the routing table from an RF control channel.